Unit-1 Introduction to Biology

(MCQs)

1.1 Introduction to Biology

1- The scientific study of animals is called:
(A) Physics (B) Chemistry
(C) Biology (D) Farming

2- From which language the word Biology is derived?
(A) Greek (B) Urdu
(C) English (D) German

3- Meaning of "Logos" is:
(A) Activity (B) Structure
(C) Thinking (D) Function

1.1.1 Divisions and Branches of Biology

4- Zoology deals with.
OR Scientific study of animals is called:
(A) Plants (B) Animals
(C) Atom (D) Cell
OR (A) Biology (B) Zoology
(C) Botany (D) Microbiology

5- The scientific study of plants is called:
(A) Histology (B) Anatomy
(C) Zoology (D) Botany

6- The branch of biology which deals with the study of classification of organisms is called:
(A) Systematics
(B) Taxonomy
(C) Physiology
(D) Cell Biology

7- Entomology is the study of:
(A) Tissue (B) Organelles
(C) Insects (D) Bacteria

8- Histology is scientific study of
(A) Organs (B) Cells
(C) Muscles (D) Tissues

9- The microscopic study of tissue is called:
OR The microscopic study of tissues is called:
(A) Physiology (B) Morphology
(C) Histology (D) Entomology

10- The study of genes and their role in inheritance is called:
OR The study of inherit characteristics from one generation to the next generation is called:
(A) Histology (B) Anatomy
(C) Genetics (D) Inheritance

11- Study of drugs and their effects on human body is called:
(A) Sociobiology
(B) Parasitology
(C) Entomology
(D) Pharamacology

12- Study of internal structure:
OR The branch of biology that deals with the study of internal structures:
OR The study of internal structure of organisms iscalled:
(A) Morholoy (B) Anatomy
(C) Histology (D) Microbiology

13- The study of insects called:
OR Branch of biology deals with the study of insects is called:
(A) Taxonomy
(B) Entomology
(C) Biotechnology
(D) Pharmacology

14- Remains of extinct organisms are called:
(A) Corals (B) Fossils
(C) Coral reef (D) Endangered

15- The study of Fossils is called:
(A) Immunology
(B) Pharmacology
(C) Paleontology
(D) Parasitology

16- If a scientist is studying the method of inserting human insulin gene in bacteria, which branch of biology it may be:
(A) Anatomy (B) Physiology
(C) Biotechnology (D) Pharmacy

17- The study of the functions of different parts of living organsims.
(A) Morphology (B) Anatomy
(C) Histology (D) Physiology

18- The study of the molecule of life is called ______:
(A) Anatomy
(B) Immunology
(C) Physiology
(D) Molecular Biology

19- Which branch of biology deals with the study forms and structure of living organism?

(A) Anatomy
(B) Morphology
(C) Histology
(D) Physiology

20- The branch of biology which deals with the study of nucleic acid is called:
(A) Embryology
(B) Socio-biology
(C) Texonomy
(D) Molecular biology

1.1.2	Relationship of Biology to other Science

21- **The career related with gardening is:**
(A) Medicine **(B) Horticulture**
(C) Farming (D) Forest

22- **Horticulture belongs to:**
(A) Gardening (B) Poultry
(C) Fishries (D) Medicine

23- **Economically study of animals is called:**
(A) Biohysics
(B) Biochemistry
(C) Biogeograhy
(D) Bioeconomics

24- **Breeding of cow belongs to:**
(A) Forming
(B) Animal Husbandry
(C) Morphology
(D) Genetics

25- **It deals with compounds of living organism.**
(A) Biophysics
(B) Biochemistry
(C) Bioeconomics
(D) Biometery

26- **Transplantation of Kidneys is example of:**
OR **Transportation of kidney belongs to:**
(A) Medicine (B) Morphology
(C) Physiology **(D) Surgery**

1.1.3	Quran and Biology

27- **We made every living thing from:**
(A) Water (B) Soil
(C) Air (D) Fire

28- **Water makes the composition of protoplasm of all living organisms:**
(A) 50--60% **(B) 60--70%**
(C) 60--80% (D) 60--90%

29- **Jabir Bin Hayan was born in:**
(A) Iraq **(B) Iran**
(C) Pakistan (D) England

30- **Famous book of Jabir-Bin-Hayan is:**
(A) Al-Kheil (B) Al-Wahoosh
(C) Al-Abil **(D) Al-Nabatat**

31- **The famous book Al-Nabatat was written by:**
(A) Bu-Ali-Sina
(B) Jabir-bin-Hayan
(C) Abdul Malik
(D) Ibn-e-Nafees

32- **The founder of Medicine is:**
(A) Jabir Bin Hyan
(B) Alrazi
(C) Bu Ali Sina
(D) Aristotle

33- **The author of Al-Qanoon fil-Tib is:**
(A) Ali Ibn-e-Isa
(B) Jabir Bin Hayan
(C) Bu Ali Sina
(D) Abdul Malik Asmai

34- **The name of famous book written by Bu-Ali-Sina is:**
OR **Book of Bu Ali Sina on medicine is:**
(A) Al-Nabatat
(B) Al-Wahoosh
(C) Al-Qanun-Fil-Tib
(D) Al-Haywan

35- **Abdul Malik Asmai was born in:**
(A) 721 AD (B) 780 AD
(C) 740 AD (D) 980 AD

36- **Famous book Al-Abal written by:**
(A) Jabir Bin Hyaan
(B) Abdul Malik Asmai
(C) Bu Ali Sina
(D) Darwin

37- **The first Muslim scientist who detailed studied animals was:**
(A) Jabir Bin Hayan
(B) Abdul Malik Asmai
(C) Bu Ali Sina
(D) Al-razi

1.2	Levels of Orgnization of Organisms

38- **The total number of elements in nature are:**
(A) 92 (B) 93 (C) 91 (D) 90

39- **The number of bioelements in nature is:**

OR **The total number of bioelements is:**
(A) 13 (B) 14 (C) 15 (D) 16

40- **An example of bio molecule is:**
(A) Proton (B) Protein
(C) Iodine (D) Chlorine

41- **Bioelement is: OR Example of Bio-Element is:**
(A) Aluminium (B) Cobalt
(C) Bromine (D) Carbon

42- **Which of these bioelements is in the highest Percentage in protoplasm?**
(A) Carbon (B) Hydrogen
(C) Oxygen (D) Nitrogen

43- **The element mostly present in an individual is:**
(A) Nitrogen (B) Carbon
(C) Oxygen (D) Hydrogen

44- **Which one of these elements has the highest percentage in living organisms:**
(A) Carbon (B) Hydrogen
(C) Oxygen (D) Nitrogen

45- **How many element make 99% of the total mass?**
(A) Four (B) Six
(C) Eight (D) Ten

46- **The element that makes 03% of the total mass of living organism is:**
(A) Hydrogen (B) Carbon
(C) Oxygen (D) Nitrogen

47- **The element that makes 65% of the total mass of living organisms is:**
(A) Hydrogen (B) Carbon
(C) Oxygen (D) Nitrogen

48- **The molecules which have low molecular weight are called:**
(A) Macromolecules
(B) Micromolecules
(C) Organic Molecules
(D) Inorganic molecules

49- **Examle of Micromolecule is:**
(A) Glucose (B) Starch
(C) Lipids (D) Proteins

50- **An example of macromolecule is:**
OR **Which of one is macromolecule:**
(A) Water
(B) Glucose
(C) Protein/Starch
(D) Sodium chloride

51 **Organelles assemble to form:**
(A) Cells (B) Tissues
(C) Systems (D) Organ

52- **Cells performing similar functions arranged into groups are called:**
(A) Organism
(B) Organ system
(C) Organ
(D) Tissues

53- **Which of the tissues make the glandular tissue in animals.**
OR **....... tissue also makes the glandular tissue in animals:**
(A) Epithelial (B) Connective
(C) Muscular (D) Nervous

54- **Epidermal tissue is found in:**
(A) Pigeon (B) Sparrow
(C) Crow (D) Onion

55- **An example of organ is:**
(A) Neuron (B) Electron
(C) Carbon (D) Stomach

56- **Level of organization that is less definite in Plants is:**
(A) Organism level
(B) Organ System level
(C) Organ level
(D) Tissue level

57- **Member of the same species living in the same place at same time, which level they forms?**
(A) Habitat
(B) Biosphere
(C) Community
(D) Population

58- **In 2010 the Population of Humans in Pakistan is:**
(A) 173.5 million Persons
(B) 17 million Persons
(C) 19.5 million Persons
(D) 10.07 million Persons

59- **When we study the feeding relation among animals of different species of a forest, at which level of organization we are?**
(A) Individual (B) Population
(C) Community (D) Biosphere

60- **The part of earth where communities of living organisms exists is called:**
OR **The highest level of biological organization is:**
OR **The portion of earth inhabited by communities called:**
(A) Habitat (B) Biosphere
(C) Ecosystem (D) Population

61- There areas where living organisms interct with non-living components of the environment are called ________:
(A) Population (B) Community
(C) Ecosystem (D) Species

1.2.1 Cellular Orgnizations

62- Reproductive organ of the Plant is:
(A) Root (B) Stem
(C) Leaf (D) Flower

63- Mustard Plant is sown in:
(A) Winter (B) Summer
(C) Spring (D) Autumn

64- The scientific name *Brassica campestris* is for the Plant:
(A) Mango (B) Mustard
(C) Apple (D) Melon

65- In which organism colonial organization present in the following?
(A) Amoeba (B) Paramecium
(C) Euglena (D) Volvox

66- Which of these does not represent unicellular organization?
(A) Amoeba
(B) Volvox
(C) Paramecium
(D) Bacteria

67- Volvox is example of:
(A) Red alga
(B) Brown alga
(C) Blue green alga
(D) Green alga

68- What is true about volvox?
OR Which organism has Colonial Organization?
(A) Unicellular Prokaryotes
(B) Unicellular eukaryotes
(C) Colonial eukaryotes
(D) Multicellular eukaryotes
OR (A) Volvox (B) Amoeba
(C) Frog (D) Mustard plant

69- Unicellular is:
(A) Rabbit (B) Euglena
(C) Horse (D) Frog

70- Frog has two eyes, each of which has....:
(A) Two eyelids
(B) One eyelid
(C) Three eyelids
(D) No eyelid

71- An example of multi-cellular organism is:
(A) Bacteria (B) Frog
(C) Amoeba (D) Euglena

72- Scientific name of pea plant is:
(A) Dilbergia Sisso
(B) Pisum Indicum
(C) Homosapiens
(D) Pisum Sativum

(Short Questions)

1.1 Introduction of Biology

1. What is Science?
Ans. Science is the study in which observations are made, experiments are done and logical conclusions are drawn in order to understand the principles of nature.

2. From which two Greek words/the word Biology is made?
OR Define Biology.
Ans. The word biology is derived from two Greek words i.e. "bios" meaning "life" and "logos" meaning "thought or reasoning".

1.1.1 Divisions and Branches of Biolgoy

3. Write names of three main divisions of biology.
Ans. Three main divisions of biology are given below:
(i) **Zoology**: This division of biology deals with the study of animals.
(ii) **Botany:** This division of biology deals with the study of Plants.
(iii) **Microbiology:** The division of biology deals with the study of micro-organisms such as bacteria etc.

4. What is difference between Zoology and Botany?
OR Define Botany.
Ans. Zoology:
The major division of biology which deals with the study of animals is called Zoology.
Botany:
The division of biology which deals with the study of plants is called Botany.

5. Differentiate between Morphology and physiology.

OR Define Physiology.

Ans. Morphology:

This branch deals with the study of form and structures of living organisms.

Physiology:

This branch deals with the study of the functions fo different parts of living organisms.

6. Differentiate between Morphology and Histology.

OR Write down the definition of Morphology.

Ans. Morphology:

Morphology is the branch of biology that deals with the study of form and structure of organisms.

Histology:

Histology is the branch of biology that deals with the microscopic study of tissues of organisms.

7. Differentiate between Microbiology and Morphology.

Ans. Microbiology: Microbiology is a major division of biology which deals with the study of micro organisms such as bacterias, viruses, protozoa etc.

Morphology: Morphology deals with the study of the structures and shapes of living organisms.

8. Differentiate between Cell Biology and Histology.

OR Define Histology.

OR What is meant by cell biology?

Ans. Cell Biology:

The study of the strcutures and functions of cells and cell organelles is called cell biology. This branch also deals with the study of cell division.

Histology:

The microscopic study of tissues is called histology.

9. Define pharmacology and immunology.

Ans. Pharmacology: Pharmacology deals with the study of medicines and their effects on the body of living organisms.

Immunology: Immunology is the study of Immune system of animals that defend the body against harmful microorganisms.

10. Define Biochemistry and Morphology?

Ans. Biochemistry: Biochemistry deals with the study of the chemistry of different compounds and chemical reactions occurring in livinig organisms.

Morphology: Morphology is related to study of forms and structure of organisms.

11. What is Immunology?

OR Define Immunology.

Ans. Immunology is the branch of biology which deals with the study of the immune system of animals, which defends the body against invading microbes.

12. Define Entomology.

Ans. Entomology is the study of insects, like Cockroaches, aunts etc.

13. Define Anatomy.

Ans. The study of internal structures is called anatomy.

14. What is meant by fossils?

Ans. Fossils are dead remains of extinct organisms and the study of fossils is called paleontology.

15. What are parasites? Define parasitology.

OR What are parasites?

Ans. Parasites: Parasites are the organism that take food and shelter from living hosts and in return, harm them.

Parasitology: Parasitology is the branch of biology that deals with the study of parasites.

16. What do you mean by Parasitology and biotechnology?

Ans. Parasitology: Parasitology deals with the study of parasites like study of plasmodium.

Biotechnology: Biotechnology deals with the practical application of the living organisms to make substances for the welfare of mankind like production of insulin from bacteria.

17. What are Parasites? Give an example.

OR Define Parasites and give two examples.

Ans. Parasites are the organisms that take food and shelter from living hosts and

in return, harm their (hosts) lives.
Examle: 1. Leach 2. Hook Worm

18. What is meant by Taxonomy?
OR Define Taxonomy.
Ans. Taxonomy: It is the study of the naming and classification of organisms into groups and subgroups.

19. Write the difference between physiology and taxonomy?
Ans. The difference between physiology and taxonomy is given below.

Physiology:
The branch of biology which deals with the study of the functions of different parts of living organisms is called physiology.

Taxonomy:
This branch of biology deals with the study of the naming and classification of organisms into groups and subgroups.

20. Define Biotechnology.
OR What is meant by Biotechnology?
OR What is Biotechnology? Elaborate its usefullness.
Ans. Biotechnology deals with the practical application of the living organisms to make substances for the welfare of mankind. i.e the production of insulin from bacteria.

21. Define Genetics.
Ans. The study of genes and their roles in inheritance is called genetics. Inheritance means the transmission of characters from one generation to the other.

22. Define Genes.
Ans. Genes is unit of inheritance. It transform genetic informations from one generation to next generation.

23. What is meant by pharamacology?
Ans. Pharmacology is the study of drugs and their effects on the system of the human body.

24. What is meant by molecular biology?
OR Define Molecular biology? Also give example.
Ans. The study of molecules of life is called molecular biology like, Protein carbohydrates .

25. Differentiate between Environmental Biology and Cell Biology.
OR Define cell Biology.
Ans. Environmental Biology:
i- The study of interaction of organisms and their environments is called environmental biology.
ii- Alternative term for Environmental Biology is Ecology.

Cell Biology:
The microscopic study of tissues is called histology.

26. Define physiology and anatomy.
Ans: Physiology: This branch deals with the study of the functions of different parts of living organisms.
Anatomy: The study of internal structures is called anatomy.

27. Define genetics and embryology.
Ans: Genetics: The study of genes and their roles in inheritance is called genetics. Inheritance means the transmission of characters from one generation to the other.
Embryology: The branch of biology in which we study the development of an embryo to new individual is called Embryology.

28. What do you know about the profession "Agriculture".
Ans: Agriculture's profession deals with the food crops and the animals which are the source of food. An agriculturist works for the betterment of crops like wheat, rice, corn etc and animals like buffalo cow etc from which we get food. In Pakistan there are many universities which offer professional courses on agriculture.

1.1.2 Relationship of Biology to other Science

29. Name any four careers in Biology.
Ans. 1. Medicine 2. Fisheries
3. Agriculture
4. Animal Husbandry

30. What is meant by Bioeconomics.
Ans. Bioeconomics deals with the study of organisms from economical point of view. For example the cost value and profit value of the yield of wheat can

be calculated through bioeconomics and benefits or losses can be determined.

31. Define Biochemistry.

Ans. Biochemistry: The study of chemistry of different compounds and chemical processes occurring in living organisms is known as bio-chemistry.
Examle: Photosynthesis, digestion of food and respiration.

32. Define Biometery.

Ans. Biometry: It deals with the study of biological processes using mathematical techniques and tools.
Example: Analyze the data gathered after experimental work, biologists have to apply the roles of mathematics.

33. Define Socio-biology.

Ans. Socio biology is the branch of biology that deals with the study of social behaviour of animals that make societies.

34. Explain Medicine and Surgery, Career in Biology.

Ans. Medicine: The profession of medicine deals with the diagnosis and treatment of diseases in human.
Surgery: In surgery we deals with the repairing, replacing, removing of body parts.
Example: The removal of stones through renal surgery.
Transplantation of kidney, liver etc.
Both these professions are studied in the same basic course MBBS and then students go for specialization.

35. Write two uses of surgery.

Ans. Uses of surgery:

i) In surgery, the parts of the body may be repaired.
ii) In surgery, the parts of the body may be replaced.
iii) In surgery, the parts of the body may be removed.

36. Describe Animal Husbandry as career in biology.

OR What is meant by Animal Husbandry?

Ans. Animal Husbandry: It is the branch of agriculture concerned with the care and breeding of domestic animals.
Example: Cattle, sheep etc.
professional courses in animal husbandry can be adopted after the higher secondary education in biology.

37. What do you mean by Horticulture and how it is related to Agriculture?

OR Shortly explain profession of Horticulture.

OR Describe any two applications of horticulture in daily life.

Ans. Horticulture: Horticulture profession includes the art of gardening. It is related to agriculture because a horticulturist works for the betterment of existing varieties and for the production of new varieties of ornamental plants and fruit plants.

38. What is Farming?

OR Shortly explain that Farming is related to biology's profession.

OR What do you know about the profession Farming?

Ans. It deals with the development and maintenance of different type of farm. For example in some farms animal breeding technologies are used for the production of animals which are better protein and milk source. In poultry farms chicken and eggs are produced. Similarly in fruit farms, different fruit yielding plants are grown. A student who has gone through the professional course of agriculture, animal husbandry or fisheries can adopt this profession.

39. What are major biological issues nowadays?

OR Explain major biological issues nowadays.

Ans. Human population growth, infectious diseases, addictive drugs and pollutions are the major biological issues nowadays.

40. What is Biogeography?

OR Define Biogeography.

Ans. Biogeography is the study of occurrence and distribution of different species of living organisms in different geographical regions of the world. It applies the knowledge of the characteristics of particular geographical regions to determine the

characteristics of living organisms found there.

41. Define Biophysics.
OR What is meant by Biophysics?
Ans. Biophysics: It deals with the study of principles of physics, which are applicable to biological phenomena.
Example: There is a similarity between the working principles of lever in physics and limbs of animals in biology.

1.1.3 Quran And Biology

42. Write achievements of Bu Ali Sina in Biology.
OR Write down few achievements of Bu-Ali-Sina in Biology?
OR Write the contribution of Bu Ali Sina.
OR What is the role of Bu-Ali-Sina in Biology?
Ans. He is honoured as the founder of mdicine and called as Avecena in the west. He was a physcian, philosopher, astronomer and poet. One of his books "Al-Qanun-fil-tib" is known as canon of medicine in west.

43. Name famous books of Jabar Bin Hayan and Abdul Malik Asmai.
OR Name the famous writings of Abdul Malik Asmai.
OR Write the names of two famous books of Jabir Bin Hayan.
Ans. Al-Nabatat and Al-Haywan are written by Jabir Bin-Hayan. Famous books written by Abdul malik Asma were Al-Abil (Camel), Al-Khail Horses, Al-Wahoosh (animals), Kalq al Ansan.

44. Why is Jabir Bin Hayan famous?
OR Write two inventions of Jabir Bin Hayan?
OR What do you know about Jabir-bin-Hayan?
OR Describe briefly the work of Jabir Bin Hayan.
Ans. Jabir Bin Hayan (721-815AD)
Jabir Bin Hayan was born in Iran. He introduced experimental investigation in chemistry and also wrote a number of books on plants and animals. His famous books are "Al Nabatat" and "Al Haywan".

1.2 Leveld of Orgnization of Organisms

45. Write down the levels of organization is sequence.
Ans.
(i) Sub atomic and Atomic level
(ii) Molecular level
(iii) Organelle and cell level
(iv) Tissue level
(v) Organ and Organ system level
(vi) Organism level
(vii) Population leve
(viii) Community level
(ix) Biosphere level.

46. What is meant by Bio-Elements?
OR Write name of biological elements.
Ans. Out of the 92 kinds of elements that occur in nature. 16 are bioelements. These take part in making the body mass of a living organisms. Out of these bioelements.
Only six (O, H, N, Ca, and) make 99% of the total mass.
Other ten (K, S, Cl, Na, Mg, Fe, Cu, Mn, Zn and I)One collectively make 01% of the total mass.

47. Write down the names of groups fo biomolecules and give example.
OR What are biomolecule?
Ans. Biomolecules: Bioelements in living organisms combine through ionic and covalent bond formation to form stable particles, known as biomolecules.
Groups: Biomolecules are divide into two following groups:
i- **Micromolecules** have low molecula weight for example: Glucose anc water etc.
ii- **Macromolecules** have high molecular weight for example: Starch. Proteins and lipids etc.

48. Differentiate between Micromolecules and Macromolecules with examles.
OR Give two examples of Micromolecules and Macromolecules each.
Ans. Micromolecules:
Molecules with low molecular weight are called micromoleculues.
Example: Glucose, water.
Macromolecules:
Molecules having high molecular weight are called macromolecules.
Example: Starch proteins, lipids.

49. Define Habitat.

Ans. Habitat means the area of the environment in which organism lives.

50. What is Community Level? Give example.

OR Define Community.

OR What is meant by community. Give example.

Ans. Community Level: A community is an assemble of different populations, interacting with one another within the same environment.

Example: A forest may be considered as a community. It includes different plant, micro organisms, fungi and animal species.

51. Write examples of complex communities.

Ans. Complex communities: Complex communities contain greater number and size of populations.

Example:

1. Forest community.
2. Pond Community.

52. Define Population. OR What is population level?

Ans. Population: A population is defined as a group of organisms of the same species located at the same place, in the same time.

Example: Human population in Pakistan in 2010 comprises of 173.5 million individuals.

53. Differentiate between population and community?

Ans. Population:

A population is defined as a group of organisms of the same species located at the same place.

Community:

A community is an assemblage of different populations interacting with one another within the same evironment.

54. What is species? Write an example.

OR Define species.

Ans. Species: A species is a group of organisms which can interbreed freely among them and can reproduce fertile offsring, but are reproductively isolated from all other such groups in nature. Basic unit or category of classification is "species".

Examples: Human, donkey, hourse etc.

55. Differentiate between Species and Habitat.

Ans. Species:

Species is a group of organisms which can interbreed among themselves to produce fertile offspring.

Example: Human being.

Habitat:

Habitat is the area of an environment in which an organism lives

Example: Forest.

56. What is Biosphere level?

OR Shortly explain Biosphere.

OR What do you mean by Zone of life?

OR What is a biosphere. OR Define Biosphere.

OR Define highest level in levels of organizaion.

OR What is meant by biosphere and zone of life?

Ans. The part of Earth inhabited by organisms communities is known as biosphere. It constitutes all ecosystems and is called the zone of life on Earth or biosphere.

57. Define Tissue and organ also give example.

OR What is tissue level, also give examples?

Ans. Tissues: In multicellular organisms tissues can be defined as a group of similar cells specialized for the performance of a common function.

Example: In plants tissues are epidermal tissues and ground tissues etc and in animals tissues are nervous tissues and muscular tissues etc.

Organs: In organisms more than are type of tissues having related functions are organized together and make a unit, called organ.

Examle: Stomach, Kidneys, Lungs are organs.

58. Write the names of two tissues present in stomach.

Ans. i) Epithelial Tissue

ii) Muscular Tissue.

59. Write down two names of each plant and animal tissues.

Ans. Ground and vascular tissues are the plant tissues.

Nervous and Muscular tissues are the animal tissues.

60. **Write comparison between cell level and tissue level.**

OR **How do you differentiate between cell level and tissue level?**

Ans. **Cell level:**

1. Cell or cell level orgnization is a unit of structure and function of living organisms.
2. A cell level orgnization is composed of different subcellular organelles performing specific functions.

Tissue level:

1. In Tissue level of orgnization a group of similar cells performing similar functions organize together to form a tissue in multicellulr organisum.
2. All cells in a tissue level organization perform their characteristic life activities as well as their tissue related specific function.

61. **What is Organ System?**

OR **Define organ. Give one example.**

Ans. **Organ System:** Different organs performing related functions are organized together in the form of an organ system. In an organ system, each organ carries out its specific function and the functions of all organs appear as the function of the organ system.

Examlpe: Digestive system is an organ system organs like oral cavity, stomach, small intestine, large intestine, liver, and pancreas.

62. **The organ system level of animals is more complex than plants. Why?**

Ans. Organs performing similar functions in multicelular organism organize together to form organ system level. The organ system level of animals is more complex than plants because animals have to perform greater functions and activities than plants.

63. **Write two functions of muscular tissue.**

Ans.

i) Muscular tissue moves the bones of skeleton

ii) Muscular tissue makes heart beat.

1.2.1	Cellular Orgnizations

64. **Define Colonial Organization and give example.**

OR **What is colonial organization?**

Ans. **Colonial Organization:** In colonial type of cellular organization, many unicellular organisms live together but do not have any division of labour among them. Each unicellular orgnaism in a colony lives its own life and does not depend on other cells for its vital requirements.

Examle: Volvox is a green alga found in water that shows colonial organization.

65. **What is meant by unicellular orgnaization?**

Ans. In unicellular orgnaization an organism is consists of only one cell like paramecium.

66. **Write four names of unicellular organisams.**

OR **What is meant by unicellular organisms? Give two examples.**

Ans. **Unicellular Organisms:**

i- Unicellular organisms consist of only single cell.

ii- A single cell perform all functions and activities of an organism.

Example:

(i) Amoeba (ii) Paramecium
(iii) Euglena (iv) Claymedomonas

67. **Write the names of vegetative organs of Plants.**

Ans. Roots, stem branches and leaves are the vegetative organs of plants, which do not take part in the sexual reproduction of the plant.

68. **Name vegetative and reproductive parts of Mustard plant.**

Ans. **Reproductive parts:** Flowers
Vegetative parts: Roots, Stem, Branches

69. **Differentiate between vegetative and reproductive organs**

OR **What is meant by Vagetaitve Organs?**

OR **What is meant by vegetative organs of a plant? Give two examples.**

Ans. The difference between vegetative and reproductive organs are given

below

Vegetative organs:
All organs in living organisms which do not take part in sexual reproduction are called vegetative organs.

Example: Root, stem, branches and leaves are the vegetative organs because they do not take part in sexual reproduction of plant.

Reproductive organs:
The organs in living organisms which take part in sexual reproduction are called reproductive organs.

Example: Flowers are the reproductive parts of the palnts because they take part in sexual reproduction and produce fruits and seeds.

70. What is the scientific name of mustard plant? Describe its two advantages.
OR Write down two benifits of mustard plant.
OR Write down two uses of mustard plant.

Ans. The scientific name of Mustard plant is brassica compestris. This plant is sown in winter and it produces seeds at the end of winter.

Benefites:
i) The plant body is used as vegetable.
ii) Its seeds are used for extracting oil.

71. Write down the scientific name of Crow and Frog.

Ans. **Frog:** *Rana tigrina.*
House Crow: *Corvus splendens*

72. Write down the scientific name of Frog and two characteristic.

Ans. The scientific name of Frog is *Rana tigrina.*

Characteristic of Frog:
i) Frog has multicellular organization of its body.
ii) His body is made up of organ systems and each organ system consists of related organs.
iii) All body organs of frog are made up of specific tissues (epithelial, glandular, muscular, nervous etc).

Long Question (Unsloved)

1.1

1. Define biology and explain its three main major divisions
OR Biology is divided into different branches. Explain any four
OR Write a note on any five/ eight branches of biology

1.1.1

2. What do you mean by bio-technology? What is its use in the modern period?

1.1.2

3. How Biology is related to other Sciences? Describe any four
OR How biology is linked with physics, chemistry, Mathematics and Geograpy? Explain.
OR Describe the relationship of Biology to Biophysics and Biomathematics
OR Give points to advocate that Biology is linked with Physics, Chemistry, Mathematics and Economics.
OR Describe relationship of biology to other sciences with reference to inter-disciplinary sciences.

4. Explain in detail of any five carriers in Biology.
OR Describe careers in biology of medicine / surgery and horticulture
OR Write note on any four careers which a student of biology can adopt?
OR Which profession can be adopted after study of biology? Explain any 5.
OR Write a comprehensive note on farming and forestry.

1.1.3

5. Write down the contribution of Jabir Bin Hayyan and Bu Ali Sina in the science.
OR What is the role of Muslim Scientists in biology?
OR Describe contributions of Muslim Scientistsin the field of biology.
OR Write down the contributions of Jabir Bin Hayan, Abdul Malik Asmai and Bu Ali Sina in the field of Biology.
OR Define Biology. Write the contribution

of Muslim scientists in Biology

1.2

6. Describe organ and organ system level of biological organization.

OR Write a note on organization at Organ and Organ System Level.

OR What is organ?Explain organ system level

7. Explain organism level and community level.

8. Expalin atomic and molecular level.

OR Explain molecular level and tissue level.

OR Write molecular level and tissue level of organization of organisms.

9. Explain organism level and community level.

OR Write a note on community level.

OR Explain the population level and community level.

OR Describe population and community level of organization of organisms.

1.2.1

10. Describe the cellular organization in detail.

OR Write a note on cellular organizations.

OR What is cellular organization? Explain its three types.

OR What do you know about cellular organization. Explain with example.

OR Describe that how cells organize themselves to make the bodies of organisms.

OR Explain unicellular organization. Malticellular organization and conolial organization.

11. Write a note on Multicellular Organization. Explain it with two examples.

12. Write a note on Frog.